

Log 2147



National Transportation Safety Board

Washington, D.C. 20594
Safety Recommendation

Date: August 29, 1989
In reply refer to: A-89-99

Mr. Joseph F. Paquette, Jr.
President and Chief Executive Officer
Philadelphia Electric Company
2301 Market Street
Philadelphia, Pennsylvania 19101

On April 12, 1989, at 9:44 a.m. eastern daylight time, a Bell 206B (Jet Ranger) helicopter, N157P, owned and operated by the Pennsylvania State Police, collided with power transmission wires while on patrol over the Susquehanna River, near Airville, Pennsylvania. The pilot was flying low and at a slow airspeed over the river, searching for a possible suicide victim, when the aircraft struck unmarked, 7/16-inch-diameter power cables that were suspended across the river about 160 feet above the water's surface. The left skid caught the wire, and the aircraft crashed into the river. The helicopter was destroyed, and the two police officers aboard were killed.

The National Transportation Safety Board's accident statistics indicate 516 accidents occurred between January 1, 1983 and mid-1988 in which aircraft struck transmission wires; 495 of these accidents involved unmarked transmission wires. In the 516 total accidents, there were 231 fatalities and 201 serious injuries. The aircraft involved in the accidents included 407 fixed-wing aircraft, 59 rotorcraft, and several gliders, hot-air balloons, and other aircraft. Approximately 20 percent of all the accidents involved aircraft conducting aerial application.

The Federal Aviation Administration (FAA) standards for marking and lighting obstructions, as identified by 14 Code of Federal Regulations (CFR) Part 77, are contained in Advisory Circular (AC) 70/7460-1G, dated October 22, 1985. Although the AC states that any object that exceeds an overall height of 200 feet above ground level, or exceeds any obstruction standard contained in 14 CFR Part 77, Subpart C, should normally be marked, it further states that "an object that does not exceed any Subpart C standard may indicate, by its particular location, a need to be marked and/or lighted in order to promote aviation safety." Chapter 2, paragraph 11, of AC 70/7460-1G provides the standards for the placement of spherical markers.

The Safety Board's investigation of the Airville accident indicated that, unlike some other transmission lines that crossed the river near the accident site, the lines struck by the helicopter were not supported by large, metal support towers that pilots could easily identify as support towers for transmission lines. Rather, the lines were supported by wooden poles that were set back from the river in the tree line. The poles blended with the

surrounding trees, making it virtually impossible for the flightcrew to identify the transmission lines or the support structures. Under these circumstances, the Safety Board believes that if aviation orange, white, or yellow spherical markers had been mounted on the transmission wires across the river, the transmission lines probably would have been visible to the pilot of the helicopter.

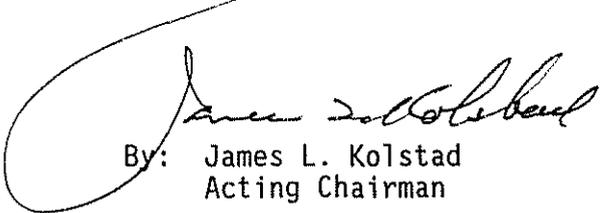
Therefore, the National Transportation Safety Board recommends that the Philadelphia Electric Company:

Mount spherical markers which conform with Federal Aviation Administration Advisory Circular 70/7460-1G on the transmission lines crossing the Susquehanna River near Airville, Pennsylvania, and on other transmission lines that cross rivers, lakes, canyons, or gorges. (Class II, Priority Action) (A-89-99)

Also as a result of its investigation, the Safety Board issued Safety Recommendation A-89-100 to the Edison Electric Institute.

The National Transportation Safety Board is an independent Federal agency with the statutory responsibility "...to promote transportation safety by conducting independent accident investigations and by formulating safety improvement recommendations" (Public Law 93-633). The Safety Board is vitally interested in any action taken as a result of its safety recommendations. Therefore, it would appreciate a response from you regarding action taken or contemplated with respect to the recommendation in this letter. Please refer to Safety Recommendation A-89-99 in your reply.

KOLSTAD, Acting Chairman, BURNETT, LAUBER, NALL and DICKINSON, Members, concurred in this recommendation.



By: James L. Kolstad
Acting Chairman